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EXAMINER

NGUYEN, HANH N

ART UNIT

PAPER NUMBER

2662

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/218,411

Applicant(s)

LEE ET AL.

Examiner

Hanh Nguyen

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said audio digital-to-analog converter" in line 16. There is insufficient antecedent basis for this limitation in the claim.

Claims 2-6 are rejected because they depend on claim 1 respectively.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 6, 7, 11, 12, 13, 17, 18, 19, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lubin et al.** (US Pat. No. 6,434,395 B1), herein after **Lubin**, in view of **Jennings et al.**, herein after **Jennings**, (US Pat. No. 6,430,174 B1).

In claims 1, 7, 13, 19, 20 and 21, **Lubin** discloses, in Fig.1, a cellular handset 100 ( a cellular handset) comprising an antenna 104 (an antenna) connected to a radio frequency module

Art Unit: 2662

102 having a transceiver (a radio transceiver connected to the antenna). See col.6, lines 28-32.

The RF module 102 (a radio transceiver) is coupled to an A/D & D/A interface 308 (an A/D converter and a D/A converter) as described in Fig.3B (an A/D converter and a D/A converter connected to the transceiver). See col.10, lines 7-12. A radio control 108 ( a cellular processor) is coupled to the A/D & D/A interface 308 (cellular processor connected to the A/D converters). See col.6, lines 40-44. Fig. 3A shows a speaker 334 (a speaker) that is coupled to an audio codec 336 (audio digital-analog converter) (a speaker connected to audio digital-analog converter), and a microphone 335 ( a microphone) that is coupled to an audio codec 336 (an audio analog-digital converter) (a microphone connected to an audio analog-digital converter). See col.10, lines 42-47.

When the antenna 104 receives radio signals, the radio module 301, in Fig.3B, converts analog signals (analog baseband signals) into digital signals (raw data signals) (the transceiver converts analog baseband signals from the antenna into raw data signals). See col.10, lines 7-12. In Fig.3A, the audio codec 336 (audio digital-analog converter) receives the digital signals (voice data streams) from processor 303 and converts it into audio communication (analog waveforms) ( the audio D/A converter converts voice data stream into analog waveforms); and voice communication (analog waveforms) is broadcasted from the speaker 334 (speaker broadcasts the analog waveform). See col.10, lines 35-47. When the antenna 104 transmits radio signals, the above steps are repeated similarly because the cellular handset 112 communicates bidirectionally. See Fig.1.

Art Unit: 2662

**Lubin et al.** does not disclose a digital cellular processor that processes raw data signals into voice over IP packetized data streams; an IP processor unpacketizes the voice over IP packetized data into voice data stream.

**Jennings et al.** discloses, in Fig.2B, a VOIP telephone 209 communicates with a mobile phone 220 via Internet 212 and a cellular network 224. In the VOIP communication, voice signals (analog) are digitized (raw data) and packetized at a sending location (process raw data into VOIP packetized data), then transmitted via an Internet in a digital format to a receiving location where they are converted into analog voice signals (unpacketize the VOIP packetized data into voice data streams) and played to a called party. See col.2, lines 1-5 & col.6, lines 22-28. Therefore, it would have been obvious to use VOIP communication of **Jennings et al.** in the radio telephone handset of **Lubin et al.** in order to packetize the raw data signal into the VOIP packet at the sending location and depacketize the VOIP packet into voice stream at the receiving location. The motivation of doing this is to transmit voice over data via IP network which is free for users while it costs more to make long distance calls between users via PSTN.

Claims 2, 3, 4, 8, 9, 10, 14, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lubin et al.** (US Pat. No. 6,434,395 B1) in view of **Jennings et al.** (US Pat. No. 6,430,174 B1, and further in view of **Grob et al.** (US Pat. No. 5,574,773).

In claims 2, 3, 4, 8, 9, 10, 14, 15 and 16, **Lubin et al.** discloses, in Fig.3A, audio codec 336 is connected to a processor 303 (A/D & D/A converter is connected to a processor). Voice communication (normal voice mode) is connected when the audio codec 336 is activated by a switch 337 (a voice switch). See col.10, lines 40-48. **Lubin et al.** does not disclose a switch that

Art Unit: 2662

is switchable in voice over IP mode, normal data mode. **Grob et al.** discloses, in Fig.3, a mobile unit 60 that comprises a switch 275. The switch 275 is switchable to work in data connection using TCP/IP protocol when voice connection is not desired (a switch that is switchable in voice over IP mode). See col.9, lines 40-50 & col.6, lines 50-55. Fig.4 shows a configuration in which a mobile unit 62 comprises a switch 234 switchable to communicate in normal data operation to a terminal 12 (a switch that is switchable in normal data mode). See col.10, lines 5-15. Therefore, it would have been obvious to design switches configured in the mobile units of **Grob et al.** in the radio handset of **Lubin et al.** in order to select/switch incoming calls based upon they are voice, data or voice over IP calls. The motivation of using the switch in the radio handset is to enhance convenience of the multi-function switch.

In claims 5, 11 and 17, **Lubin et al.** does not disclose the VOIP data stream is packetized in H.323, Session Initiate Protocol (SIP) and Media Gateway Control Protocol (MGCP).

**Jennings et al.** discloses, in Fig.2A, a telephone 209 supports VOIP protocol (VOIP protocol) during voice transmission to a digital handset 220. It is a well-known for one skills in the art to use H.323 protocol, SIP protocol and MGCP protocol to transmit voice over IP. Therefore, it would have been obvious to implement the H.323 protocol, SIP protocol and MGCP protocol into the system of **Lubin et al.** in order to packetize data via H.323 protocol, SIP protocol and MGCP protocol. The motivation of doing this because all the above protocols are standard protocols and support voice over IP data.

In claims 6, 12 and 18, the limitations of these claims have been addressed in claim 1.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 22-28 are rejected under 35 U.S.C. 102(e) as being anticipated by **Anderson** (US Pat. No. 6,047,194).

In claims 22, 26 and 27, **Anderson** discloses, in Fig.1, a packet data communication 10 over an Internet backbone 22 (Internet system) between an Internet host 12 (a first Internet device) and a mobile terminal 14 (a second Internet device). See col.5, lines 5-12. A short message service center (SMS-C) 56 generates a short message (an SMS message) which includes an IP address of the Internet host 12 (generating a SMS message with an IP address of the first Internet device embedded). See col. 5, lines 60-65 & col.6, lines 4-9. The SMS message is thereafter routed (forwarding the SMS message) to the mobile terminal 14 (the second IP device) (forwarding the SMS message to the second IP device). See col. 7, lines 60-65. Packet data in the short message is received at a Visistor Packet Mobile Switching Center (VPMSC) 44

Art Unit: 2662

which decapsulates the source IP address (extracting the IP address) from header of the packet data (extracting the IP address from the SMS message). See col.7, lines 42-50. As the mobile terminal 14 receives the short message (SMS message), packet data transmission is established between the mobile terminal 14 (second Internet device) and the Internet host 112 (the first Internet device) by using the IP address of the Internet host 12 (Using the IP address to connect the second Internet device to the first Internet device). See col.7, line 65 to col.8, line 15.

In claims 23-25 and 28, the limitations of these claims have been addressed in claim 1.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Angle et al. (US Pat. No. 6,366,771 B1) discloses Wireless Communication Network Having Voice and Data Communication Capability.

Sicher et al. (US Pat. No. 6,385,195 B2) discloses Enhanced Interworking Function for Interfacing Digital Cellular Voice and Fax Protocols and Internet Protocols.

Laiho (US Pat. No. 6,061,572) discloses Digital Cellular Telecommunications with Short Message Service Over Packet Channel.

Ray et al. (US Pat. No. 6,067,529) discloses System and Method for Sending a Short Message Containing a Purchase Information to a Destination Terminal.

Any inquiry concerning this communication or earlier communications from the



Art Unit: 2662

examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday 8:30 AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703 306-4744. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3988 for regular communications and 703 308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Fax number: 703 872-9314

Hanh Nguyen



September 30, 2002



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